STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

PETITION OF DUKE ENERGY INDIANA, LLC  )
PURSUANT TO IND. CODE §§ 8-1-2-42.7 AND  )
8-1-2-61, FOR (1) AUTHORITY TO MODIFY  )
ITS RATES AND CHARGES FOR ELECTRIC  )
UTILITY SERVICE THROUGH A STEP-IN OF  )
NEW RATES AND CHARGES USING A  )
FORECASTED TEST PERIOD; (2) APPROVAL  )
OF NEW SCHEDULES OF RATES AND  )
CHARGES, GENERAL RULES AND  )
REGULATIONS, AND RIDERS; (3)  )
APPROVAL OF A FEDERAL MANDATE  )
CERTIFICATE UNDER IND. CODE § 8-1-8.4-1;  )
(4) APPROVAL OF REVISED ELECTRIC  )
DEPRECIATION RATES APPLICABLE TO  )
ITS ELECTRIC PLANT IN SERVICE; (5)  )
APPROVAL OF NECESSARY AND  )
APPROPRIATE ACCOUNTING DEFERRAL  )
RELIEF; AND (6) APPROVAL OF A  )
REVENUE DECOUPLING MECHANISM FOR  )
CERTAIN CUSTOMER CLASSES  )

CAUSE NO. 45253

VERIFIED DIRECT TESTIMONY
OF
BRETT J. PHIPPS

On Behalf of Petitioner,
DUKE ENERGY INDIANA, LLC

Petitioner’s Exhibit 22

July 2, 2019
I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.
A. My name is Brett J. Phipps, and my business address is 526 South Church Street, Charlotte, NC 28202.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?
A. I am employed as Managing Director, Fuel Procurement, Duke Energy Progress, LLC, a utility affiliate of Duke Energy Indiana, LLC (“Duke Energy Indiana” or “Company”). In that capacity, I also provide services for Duke Energy’s other affiliate utility companies, including Duke Energy Indiana, LLC.

Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATIONAL BACKGROUND AND BUSINESS EXPERIENCE.
A. I am a 1992 graduate of Marshall University with a Bachelor of Science in Chemistry. I have worked in the energy industry for approximately 26 years. My career began in the mining industry in 1993 where I held various roles associated with surface mining operations. I was employed with Progress Energy since 1999 where I held roles in terminal operations and sales and marketing for the unregulated business. I transitioned to the regulated business in 2005 where I worked in various fuels procurement functions and leadership roles. I joined Duke Energy in July 2012 and am currently Managing
Director, Fuel Procurement. I am on the Board of Directors of the American Coal Council, and a member of: The Coal Institute, the Lexington Coal Exchange and Southern Gas Association.

Q. PLEASE BRIEFLY DESCRIBE YOUR DUTIES AND RESPONSIBILITIES AS MANAGING DIRECTOR, FUEL PROCUREMENT.

A. As Managing Director, Fuel Procurement, I participate in all aspects of the overall strategic direction and commercial management of the purchase, delivery and storage of fossil fuels that the Duke Energy regulated utilities use for the generation of electricity. As part of this activity, I monitor and provide guidance in the various areas of fuel markets, including feedback regarding supply and demand, price, quality, availability, economics and deliverability. These fuel reviews cover both existing and potential future supply sources. I also supervise the Company’s fuel procurement activity and associated transportation including the negotiation and administration of long-term and spot-purchase contracts. In addition to fuels, I also supervise procurement of reagents (products used by environmental control systems), natural gas and the overall fuel inventories for the regulated fossil generation fleet.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. I will discuss Duke Energy’s fuel procurement strategy as it relates to Duke Energy Indiana’s generating units.
II. FUEL PROCUREMENT

Q. PLEASE EXPLAIN DUKE ENERGY INDIANA’S FUEL PROCUREMENT STRATEGY.

A. Duke Energy Indiana has units that burn coal, natural gas and fuel oil.

Coal is generally purchased under long-term contracts of one year or more to assure a dependable supply of large quantities of coal with consistent quality characteristics to a generating station at a competitive price. When the Company determines its requirements to purchase coal, projected coal burns, coal inventory levels, the amount of coal under contract and the quality characteristics needed for a particular generating station are taken into account. Coal supply requirements are competitively bid and proposals are secured from producers and evaluated thoroughly, taking into account coal quality, quantity, volume flexibility, transportation alternatives and price, among other factors. The producer (or producers) whose coal offers the best value, particularly with regard to overall utilization costs and volume flexibility, is selected for further negotiations to produce a long-term contract or contracts. It is important to note that many of our long-term contracts either contain provisions for periodic price reopener negotiations, some type of price escalations and de-escalations, or a mechanism to adjust prices based upon a published market price index. In addition, our coal transportation contracts in Indiana contain fuel price surcharge provisions that are based upon published fuel price indices.

Duke Energy Indiana also purchases spot coal. Duke Energy’s Regulated Fuel Department stays continually informed as to the current market for spot and contract coal...
and specific opportunities for the purchase of such coal. At the time the Company identifies a need to purchase spot coal, Regulated Fuels will seek proposals from potential suppliers via a phone solicitation, and the resulting commitments are based on the proposals that provide the best overall economic value to Duke Energy Indiana, with key aspects of the Company’s evaluation being based on a combination of the lowest delivered cost, coal quality compatibility, and best overall utilization characteristics for a given unit or units. As long-term contract obligations expire, the Company has been utilizing increased amounts of spot coal purchases to enable its portfolio to be more responsive to current actual burns and projected future burns that have become more volatile.

For its natural gas units, Duke Energy Indiana has contracts for the purchase of gas supply, pipeline transportation, balancing and parking of natural gas needed for its generating stations.

For its oil-fired units Duke Energy Indiana has one fuel oil supplier contract to provide fuel oil for its generating stations.

A. **Coal**

Q. **HOW MUCH COAL DOES DUKE ENERGY INDIANA PURCHASE ANNUALLY?**

A. Duke Energy Indiana purchases approximately 11 million tons of coal annually.

Q. **HOW MANY OF THE COMPANY’S GENERATING STATIONS RECEIVE COAL UNDER LONG-TERM CONTRACTS?**
A. Gibson, Cayuga and Edwardsport IGCC Stations continue to be supplied by long-term agreements. Gallagher Station will continue to be supplied by spot purchases depending on how much the Gallagher Station units operate.

Q. PLEASE DESCRIBE THE STEPS THE COMPANY TAKES TO ENSURE THE COMPANY IS BUYING COAL AT THE LOWEST PRICE REASONABLY POSSIBLE?

A. We use various methods and strategies to ensure reasonable costs, including the use of staggered terms on long-term contracts, maintaining a diversified mix of suppliers and using indices, at times, in the determination of adjustment of prices. The Company also works with fuel and transportation suppliers to increase operating and volume flexibility in an effort to reduce costs. In addition, we are vigilant about monitoring and enforcing the provisions of our coal contracts with respect to quantities and qualities of coal due the Company. Further, the coal quality provisions contained in the Company’s coal supply agreements typically include penalties for non-conforming coal deliveries.

Q. PLEASE DESCRIBE THE LATEST TRENDS IN COAL MARKET CONDITIONS.

A. Published prices for U.S. coal markets have increased slightly recently in response to demand from recent weather and increased natural gas prices. The following are 2019 market price indications for the different coal producing regions as of Mid-May 2019:

High-sulfur Illinois basin coal prices are in the high $30s to mid $40s per ton, these prices are forecasted to remain through 2020; Central Appalachia coal prices are in the low $50s to low $60s per ton, these prices are forecasted to remain through 2020;
Northern Appalachia coal prices are in the low to high $40s, these prices are also
forecasted to remain through 2020 per ton; and Powder River Basin coal prices
approximately $12.10 per ton.

Coal markets continue to be challenged and there has been market volatility due
to a number of factors, including: (a) deteriorated financial health of coal suppliers; (b)
renewed uncertainty from the new administration regarding proposed and imposed U.S.
Environmental Protection Agency (“EPA”) regulations for power plants; (c) abundant
natural gas supply and storage resulting in lower natural gas prices combined with
installation of new combined cycle (“CC”) generation by utilities, especially in the
Southeast, which has also lower overall coal demand; (d) changing demand in global
markets for both steam and metallurgical coal; (e) increasingly stringent safety
regulations for mining operations, which result in higher costs and lower productivity; (f)
volatile power prices; (g) mergers and acquisitions in the different coal basins; and (h)
mining production changes in an attempt to bring supply of coal into balance with current
demand. Despite the challenges in the coal industry, the Company has not experienced
non-performance by suppliers on any of its coal contracts.

Q. **HOW MANY DAYS BURN DOES THE COMPANY MANAGE TO?**

A. Duke Energy Indiana manages to a target of approximately 45 days of coal at full load
burn. However, actual inventory levels fluctuate due to changes from, but not limited to,
the following factors: (1) weather driven demand; (2) plant availability; and (3)
commodity price fluctuations.

A. The inventory levels are shown in the table below:

Table 1

<table>
<thead>
<tr>
<th>Station</th>
<th>Days Full Load Burn (As of 5/31/2019)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cayuga</td>
<td>58</td>
</tr>
<tr>
<td>Edwardsport IGCC</td>
<td>40</td>
</tr>
<tr>
<td>Gallagher</td>
<td>34</td>
</tr>
<tr>
<td>Gibson</td>
<td>52</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>51</strong></td>
</tr>
</tbody>
</table>


A. Forecasted days of coal burn are shown in the table below:

Table 2

<table>
<thead>
<tr>
<th>Station</th>
<th>Days Full Load Burn (As of 12/31/2020)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cayuga</td>
<td>47</td>
</tr>
<tr>
<td>Edwardsport IGCC</td>
<td>46</td>
</tr>
<tr>
<td>Gallagher</td>
<td>31</td>
</tr>
<tr>
<td>Gibson</td>
<td>47</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>46</strong></td>
</tr>
</tbody>
</table>
Q. WHAT WAS THE TOTAL COAL INVENTORY LEVEL IN 2018 AND WHAT IS IT EXPECTED TO BE IN 2020?

A. The coal inventory level for Duke Energy Indiana at the end of 2018 was 2,387,404 tons. The coal inventory level for Duke Energy Indiana at the end of 2020 is expected to be approximately 2,517,963 tons.

Q. IS THE COAL INVENTORY LEVEL IN 2020 REASONABLE?

A. Yes, it is. This coal inventory level is consistent with our fuel inventory strategy. An approximate average of 45 to 46 days of coal burn for the forecasted 2020 period is reasonable and consistent with recent experience. The Company’s fuel inventory strategy is designed to balance the costs associated with maintaining coal inventory with the need to provide a reliable inventory level that when needed especially during periods of high demand, extreme weather, fuel transportation or mine production problems, Duke Energy Indiana will have adequate fuel supplies to operate its generating units.

Q. WHAT STEPS IS THE COMPANY UNDERTAKING TO ACTIVELY MANAGE ITS COAL INVENTORY LEVELS?

A. The Company continues to evaluate a host of options to effectively manage inventory levels. As mentioned previously, the Company actively manages its portfolio and has been utilizing increased amounts of spot coal to enable its purchases to be more responsive to current actual burns and projected future burns that have become more volatile. However, in cases where actual burns unexpectedly drop below projections and the Company’s inventory levels are above target, as inventory levels dictate, the Company explores options to store or defer contract coal or resell surplus coal into the
market. Due to continued weak coal market conditions, resale opportunities will continue to be extremely difficult in the near term. The Company will continue to closely monitor its anticipated coal requirements and inventories and take every action available to effectively control coal inventories in the least cost-impact manner for customers including the use of a coal price decrement on an as needed basis.

Q. BASED ON YOUR EXPERTISE, DO YOU HAVE AN OPINION AS TO WHETHER THE COMPANY IS BUYING COAL AT THE LOWEST PRICES REASONABLY POSSIBLE?

A. Yes. In my opinion, the Company is currently purchasing coal at prices as low as reasonably possible.

B. Natural Gas

Q. HOW MUCH NATURAL GAS DOES DUKE ENERGY INDIANA PURCHASE ANNUALLY?


Q. PLEASE DESCRIBE HOW THE COMPANY PURCHASES NATURAL GAS FOR ITS NATURAL GAS-FIRED GENERATING UNITS.

A. For gas-fired generators, Duke Energy Indiana purchases natural gas pursuant to supply agreements that allow for competitive daily and spot market gas supply purchases from third parties.

Duke Energy Indiana has contracts for the purchase of gas supply, pipeline transportation, balancing and parking of natural gas needed for its generating stations. A summary of the agreements is as follows: (1) on Panhandle Eastern Pipeline Company

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(“PEPL”), a firm transportation agreement, an interruptible transportation agreement, an enhanced interruptible transportation agreement and a parking service agreement. The firm natural gas transportation agreement on PEPL has a primary receipt point at the Texas Eastern / Lebanon point with delivery path to the pipeline interconnection with the Indiana Gas Company system (part of Vectren Energy Delivery of Indiana (“Vectren”) a subsidiary of CenterPoint Energy) near Montezuma, Indiana and on a firm contract to the Cayuga CT and directly off the interconnection to Noblesville Station; (2) on Texas Eastern Pipeline Co. (“TETCO”), an interruptible transportation contract, a Lebanon lateral interruptible transportation agreement and operational balancing agreement with natural gas transportation and balancing for the Madison Station; (3) on Midwestern Pipeline a firm transportation agreement, a park and loan agreement, and an operational balancing agreement for gas delivery and parking services for the Wheatland Generation Station, Vermillion Station, and Edwardsport IGCC; (4) a gas transportation service agreement with Vectren Energy Delivery of Indiana – South for Edwardsport IGCC; and (5) an interruptible transportation agreement and a pooling transportation service on ANR Pipeline Company for the Henry County Station. The Company primarily utilizes Sequent Energy Management, L.P. to schedule and procure natural gas consumed at Madison Generation Station, and Tenaska Marketing Ventures for natural gas consumed at Wheatland, Cayuga CT, Noblesville, Vermillion, Henry County, and Edwardsport, IGCC.

Q. PLEASE DESCRIBE HOW THE PRICE OF NATURAL GAS HAS CHANGED IN RECENT MONTHS.
A. Spot natural gas prices are dynamic, volatile and can change significantly day to day based on market fundamental drivers. For the period of January 1, 2019 through May 31, 2019, the daily prompt month Henry Hub Futures price for natural gas ranged between a low of $2.49 per MMBtu on April 25, 2019 to a high of $3.59 per MMBtu on January 15, 2019. The average daily settlement price during this time period was $2.78 per MMBtu. The futures price is not indicative of the actual delivered gas price to Duke Energy Indiana’s generation stations; however, it is an indication of prompt month natural gas pricing in the Gulf Coast region.

Q. DO YOU HAVE AN OPINION AS TO WHETHER THE COMPANY PURCHASED NATURAL GAS AT THE LOWEST PRICES REASONABLY POSSIBLE?

A. Yes. It is my opinion that the Company purchased natural gas at the lowest cost reasonably possible.

C. Oil

Q. HOW MUCH OIL DOES DUKE ENERGY INDIANA PURCHASE ANNUALLY?

A. During a (3) year average period from 2016-2018, Duke Energy Indiana purchased approximately 3.6 million gallons of fuel oil annually.

Q. REFERRING NOW TO THE COMPANY’S PURCHASE OF OIL, WILL YOU DESCRIBE THOSE PURCHASES?

A. Oil for peaking and cycling units is purchased from one supplier at the current index prices as of the date of delivery under prearranged logistics. Our primary oil requirements are for #2 ultra-low sulfur fuel oil, which varies little in delivered quality.
Q. BASED UPON YOUR EXPERIENCE, DO YOU HAVE AN OPINION AS TO
WHETHER THE COMPANY PURCHASED OIL AT THE LOWEST PRICES
REASONABLY POSSIBLE?
A. Yes. It is my opinion that the Company purchased oil at the lowest cost reasonably
possible.

III. DUKE ENERGY INDIANA ANNUAL 2020 BUDGET
FUEL AND PURCHASE POWER EXPENSE
Q. DID THE FUELS AND SYSTEM OPTIMIZATION GROUP PROVIDE WITNESS
JACOBI WITH THE ELECTRIC FUEL AND PURCHASE POWER COST
FORECAST USED IN ESTABLISHING THE FUEL AND PURCHASE POWER
EXPENSE IN THE DUKE ENERGY INDIANA 2020 BUDGET?
A. Yes, The Fuels and System Optimization group provided Witness Jacobi the electric fuel
and purchased power cost forecast used in establishing the fuel and purchase power
expense in the Duke Energy Indiana 2020 budget. As Managing Director, Fuel
Procurement I am responsible for the fuel related inputs to the production cost model
used to simulate the generation output and the associated costs used to create the forecast.

Q. WHAT ARE THE MAJOR FUEL AND PURCHASED POWER ASSUMPTIONS
REFLECTED IN THE COMPANY’S 2020 BUDGET?
A. To forecast the output of the Company’s generating units, the Company uses an
externally developed production costing model calibrated to the Duke Energy Indiana
system for forecasting. All of Duke Energy Indiana’s generating units are represented in
the model with their key characteristics, such as capacity, fuel type, heat rate, and
emission rates. Other inputs include fuel costs for each unit, forced outage rates, the market value for emission allowances, the market price for power, and the Company’s load forecast for native load customers. The model simulates the economic dispatch of the Company’s generating fleet and projects purchases on an hourly basis to meet the forecasted load for current and future periods. For the time periods forecasted, the model calculates the amount and type of fuel that would be used, the number of emission allowances consumed, and the amount of power generated and purchased to most economically serve our customers.

The Company’s fuel forecasting methodology for natural gas pricing incorporates third-party market natural gas prices and volatility at the time of forecast into the fuel forecast. The market volatilities used are obtained and derived from observed 3rd party option pricing from the Intercontinental Exchange. Third-party basis adders are included to deliver the gas to the generating stations along with any transportation and loss charges. The coal fuel costs are derived based on each station’s weighted average cost of coal which are calculated by incorporating existing inventory costs, projected contractual costs including transportation and third-party market coal prices.

Q. IN YOUR OPINION, ARE DUKE ENERGY INDIANA’S RETAIL JURISDICTIONAL FUEL COSTS ASSUMPTIONS FOR 2020 REASONABLE?

A. Yes. Duke Energy Indiana makes every reasonable effort to acquire fuel so as to provide electricity to its retail customers at the lowest fuel cost reasonably possible. As the Company explains in its quarterly fuel adjustment clause proceedings, Duke Energy Indiana purchases coal pursuant to long-term contracts entered into after competitive
bidding and on the spot markets. For gas-fired generators, Duke Energy Indiana purchases natural gas pursuant to supply agreements that allow for competitive daily and spot market gas supply purchases from third parties.

IV. CONCLUSION

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY AT THIS TIME?

A. Yes.
VERIFICATION

I hereby verify under the penalties of perjury that the foregoing representations are true to the best of my knowledge, information and belief.

Signed: Brett Phipps

Dated: 7/2/2019